

a slider supported by a suspension arm providing a load weight and obtaining a floating force due to a relative motion of the slider with respect to a recording medium so that a gap is produced between a bottom surface of the slider and a surface of the recording medium due to a balance between the load weight and the floating force; and

a probe comprising a microscopic aperture formed in the bottom surface of the slider for producing a near-field light or converting a near-field light produced on a surface of the recording medium into a propagation light without a lens being disposed proximate the microscopic aperture for producing or converting the near-field light;

wherein the recording medium and the probe interact through the near-field light when the slider is caused to undergo scanning movement relative to a surface of the recording medium to thereby effect at least one of the recording of information onto the recording medium and the reproducing of information stored on the recording medium; and

wherein the probe protrudes from the bottom surface of the slider toward the recording medium so that a distance between the probe and the recording medium is smaller than a distance between a part of the bottom surface of the slider closest to the recording medium and the recording medium so that the probe can be brought to within several nanometers to

several tens of nanometers close to the recording medium to enable high resolution optical reading and/or recording of data on the recording medium.

19. (Three Times Amended) A near-field optical head comprising: a support member mounted to undergo relative movement with respect to a sample; and a probe protruding from a bottom surface of the support member and having a microscopic aperture formed therein for producing a near-field light or converting a near-field light produced at a surface of the sample into a propagation light without a lens being disposed proximate the microscopic aperture for producing or converting the near-field light; wherein the sample and the probe interact through the near-field light when the support member undergoes relative movement with respect to the surface of the sample; and wherein a part of the bottom surface of the support member closest to the sample is more distant from the sample than the probe so that the probe can be brought to within several nanometers to several tens of nanometers close to the sample.

ADDITIONAL FEES:

No additional fees are believed required; however, should it be determined that a fee is due, authorization is hereby given to charge any such fee to our Deposit Account No. 01-0268.